

**REMARKS**

Claims 1-22 are pending and under consideration. Reconsideration is respectfully requested.

**ITEM 3: ALLOWABLE SUBJECT MATTER**

Claims 2-3, 5, 7, 8, 10, 13-14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant appreciates the indications of allowable subject matter. However, claims 2-3, 5, 7-8, 10, 13-14 and 17 are not rewritten since patentability is deemed to reside in respective parent claims 1, 6, 11, and 15.

**ITEM 2: REJECTION OF CLAIMS 1, 4, 6, 9, 11-12, 15-16 and 18-22 UNDER 35 U.S.C. §103(a)  
AS BEING UNPATENTABLE OVER MORIYA (U.S.P. 6, 078, 460) IN VIEW OF  
YOSHIMOTO ET AL. (U.S.P. 6, 229, 784)**

Independent claims 1, 6, 11, 15 and 18 (and respective dependent claims 4, 9, 12, 16 and 19-22) are rejected under 35 U.S.C. §103(a) as being unpatentable over Moriya in view of Yoshimoto. The rejections are traversed.

According to aspects of the present invention, a head switching method, a computer-readable medium encoded with processing instructions implementing a method, and a system are provided that remove unnecessary search operations using a virtual cylinder address, even if there are deviations in physical track addresses in a vertical direction among disks.

It is understood in the art that a head switching operation is an operation of switching from one head to another head among heads aligned in a vertical direction. A HDD can continuously write data through this head switching operation.

Assuming that there is no deviation in physical track addresses in a vertical direction among the disks, the HDD can continuously write data from one disk to another disk without performing a search operation after the head switching operation when the physical track addresses of the two disks are the same.

However, in conventional methods and systems if there are deviations in the physical track addresses of the disks, the HDD must perform a search operation after the head switching operation is performed to find a track on the disk corresponding to the head that is switched to in the head switching operation.

According to an aspect of the present invention this problem is removed by using a virtual cylinder address. According to an aspect of the present invention, all the tracks in a

vertical line are designated by the same virtual cylinder address and deviations from the vertical cylinder address in the disks are detected and registered. That is, according to an aspect of the present invention, when a head switching operation is performed, registered deviations are referred to when calculating a physical track address of the disk corresponding to the head that is switched to in the head switching operation, and thus, a search operation does not need to be performed.

Independent claims 1 and 6, for example, recite a method, and a computer-readable medium implementing a method, using claim 1 as an example, including "applying a deviation of the switched head, which is recorded in the mapping table, to the virtual track or the sector address . . . and accessing the track or the sector to be accessed based on the obtained physical track or sector address."

#### **Moriya and Yoshimoto are Nonanalogous Art**

Moriya discusses compensating for a MR offset, that is, a gap between a write head and a read head. Yoshimoto discusses an optical disk having a plurality of recording areas.

That is, neither Moriya nor Yoshimoto discuss methods or systems analogous to methods and systems according to recited aspects of the present invention. Accordingly, even an *arguendo* combination of such nonanalogous art does not discuss features as recited by the claims of the present invention.

Applicant submits that features recited by each of the independent claims are not discussed by the art relied on by the Examiner, alone or in an *arguendo* combination.

#### **No Motivation To Combine The Art**

Further, Applicant submits there is no motivation or reasonable chance of success to modify the art as the Examiner contends. As provided in MPEP §2144. 04:

(t)he mere fact that a worker in the art could rearrange the parts of the reference device . . . is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation . . . without the benefit of appellant's specification, to make the necessary changes in the reference device.

Since a pickup included an optical disk drive discussed by Yoshimoto, does not have a MR offset, a skilled person in the art would not combine these references.

#### **Summary**

Since the art relied on by the Examiner is nonanalogous art, and there is no motivation to combine the art in a manner as the Examiner suggests and *prima facie* obviousness is not established, the rejection should be withdrawn and claims 1, 4, 6, 9, 11-12, 15-16, and 18-22 allowed.

**CONCLUSION**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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